Hospital Topics

Successful rehabilitation in conversion paralysis

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Abstract

A rehabilitation programme for patients with conversion paralysis has been introduced in which they are offered physical rehabilitation. During an eight month period between October 1984 and May 1985 six patients who had been diagnosed as dependent on wheelchairs owing to conversion paralysis for a mean of 3 years (range 1-6 years) were entered into the inpatient neurorehabilitation programme. All six patients were able to walk within a mean of 41 days (range 10-70 days), and then relinquished a variety of aids and allowances as a result of their regained mobility. They continued to be independent at outpatient review for a mean of 10 months (range 8-15 months).

Successful rehabilitation from wheelchair dependency can be achieved by a cost effective, prolonged, inpatient neurorehabilitation programme.

Introduction

The prognosis of conversion paralysis presenting as acute paraplegia or monoplegia is good,[1-6] but when the disorder has produced a severe disability for many months or years the prognosis is less favourable.[6-8] Rehabilitation of patients with conversion disorders whose main symptom is leg paralysis of long duration presents a major challenge. We describe here the techniques used to achieve independence from wheelchairs of patients with conversion paralysis and report on the follow up of six patients rehabilitated by these techniques.

Methods

The six patients were admitted to the neurology and spinal injuries units between October 1984 and May 1985 and had had paralysis for a mean of 3·3 years (1-6 years). All six patients displayed many features of non-organic weakness and fulfilled the criteria for diagnosis of conversion disorder.[9,10]

REHABILITATION PROGRAMME

Once a patient has been identified as having conversion paralysis we explain that clinical assessment and investigation show no barrier to substantial physical recovery. The patient is offered a place in the neurorehabilitation programme and told that an inpatient stay of at least eight weeks is routine. Physical treatment in an exhortation and reward format is the basis for a simple behaviour therapy programme. As the patient achieves the goals of physiotherapy he is rewarded with praise and encouragement. He is led to identify weekend leave as a reward for satisfactory progress.

Patients who eagerly accept rehabilitation are usually more responsive than those whose attitude is, "They have tried that before and it didn't work." Acceptance of admission is the patient's first step towards recovery. The rehabilitation is non-confrontational—that is, the patient is not made aware that his disability is thought to be psychological.

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PHYSIOTHERAPY TECHNIQUES

The physiotherapist projects enthusiasm and confidence in the rehabilitation programme and is creative in developing mobilisation techniques to suit each patient. The tilt table, hydrotherapy, slings, and the balance ball are all helpful.

Initially some patients do not make any useful movement on request (often because agonist and antagonist muscles are contracted simultaneously) but they display useful limb function at times other than when formally tested. The physiotherapist induces these patients to use their "hidden power"—for example, balance exercises using an unstable support ("Gymnastik" ball) compel the patient to use his leg power and trunk balance to prevent himself from toppling over. By increasing the difficulty of the balance exercises the patient uses his legs more.

At initial assessment other patients display some useful movement in one or more joints on request. They are encouraged by seeing their legs move more freely when supported by slings. At each session the patient is given an attainable goal—for example, an increased range of movement. This achievement is rewarded with praise and leads to a more difficult goal. The tilt table refamiliarises patients with the upright position, as does standing in the hydrotherapy pool.

With prolonged immobility we assume that disuse has contributed to the muscle weakness of both trunk and limbs. Trunk balance and limb strengthening exercises ensure that such weakness does not prevent standing. Once a patient has shown good balance control in the sitting position and can extend his knees from the flexed position while standing on the tilt table we progress to a trial of standing.

Some patients perform their exercises well yet are afraid to stand up. Such a patient is raised to his feet and kept upright by helpers so that he can see that he can stand. Even though initially he may cooperate poorly he is induced by a combination of praise and exhortation to remain upright. Once standing and the first few steps have been achieved the patient responds to standard gait training. The goal before discharge is for the patient to show his relatives that he can walk several hundred yards outdoors and manage stairs easily.

NURSING MANAGEMENT

As limb function is regained the nursing staff ensure that correspondingly less is done for the patient and that he becomes increasingly more independent in both self care and mobility. He is also encouraged to demonstrate his recovery to his family at visiting time.

Case reports

We report on the rehabilitation of six patients for whom full clinical assessment and investigation had not shown a convincing pathological explanation for their symptoms. The table shows details of five cases and we report the sixth in detail.

CASE 6

A 16 year old boy who was totally quadriplegic entered for rehabilitation. His sister had had typical Guillain-Barré polyneuritis that had fully resolved some months before his illness began. Four years before admission to our

Details of patients with conversion paralysis

Case	Sex	Age	Previous diagnosis and treatment	Wheelchair dependency (years)	Salient features on investigation	Ambulant within (weeks):	Duration of follow up without relapse (months)	Current disabilities	Current independence
1	F	57	Locomotor disorder	Partial 24, full 2	Moderate cervical spondylosis and delayed left visual evoked response	2	8	Non-organic gait pattern; uses wheelchair for shopping	Lives alone, independent in the activities of daily living, normal bladder and bowel control
2	F	65	Extensive spondylitis. Cervical and lumbar spine fusions (1962)	6	Prominent cervical osteophytes	10	15	Occasional dribbling, incontinence	Sheltered housing, no wheelchair required, independent in the activities of daily living
3	F	55	Multiple sclerosis	3	Severe cervical spondylosis and low density patch in left temporal region on computed tomography	2	10	Nocturia	Sheltered housing, independent in the activities of daily living, normal bladder and bowel control
4	M	50	Myelopathy. Dorsal nerve root section (1984)	1	Normal results of myelography and spinal angiography	4	12	Back pain requiring analgesia and a brace	Unadapted house, no wheelchair required, independent in the activities of daily living, normal bladder and bowel control, drives unadapted car
5	M	37	Traumatic spinal cord injury	4	Extensive generalised disc degeneration	8	14	Back pain requiring analgesia	Home stairlift not relinquished, no wheelchair required, independent in the activities of daily living, normal bladder and bowel control, drives unadapted car

unit he had had myalgia and generalised weakness for eight weeks but recovered spontaneously. Initial creatine phosphokinase activity showed a fourfold rise but was normal thereafter. Three months later generalised weakness recurred and progressed over four years. Nerve conduction studies, electromyography, cranial computed tomography, and tests on cerebro-spinal fluid produced normal results on presentation and again after four years. A full length myelogram was normal. Concentrations of blood lead, viral studies, autoimmune screening tests, concentrations of urinary mercury, and porphyrin concentrations were all within normal limits. He became a totally dependent quadriplegic, nursed assiduously by his protective mother. He wore thoracolumbar and cervical spinal supports. He relied on condom drainage to remain dry. He and his family had been rehoused in accommodation purpose built for a quadriplegic and he received mobility and attendance allowances. He had been attending a hospital school for four years. The absence of neurological signs, together with the information that during temper tantrums he had thrown objects, led to a diagnosis of conversion disorder.

Five weeks after the start of the rehabilitation programme he could propel his wheelchair and by 10 weeks he could walk using two sticks. At medical review eight months later he walked normally and had no further use for his electric wheelchair or other aids. At art college he is now able to paint by hand rather than by mouth and play lead guitar in a college rock group.

Discussion

These findings suggest that patients suffering from prolonged paralytic conversion disorders can be successfully rehabilitated without psychiatric intervention. They may have many aids, adaptations, and allowances that are difficult to relinquish without loss of face. We offer the option of medical "cures," although other patients may receive their "cures" in religious settings and similarly avoid humiliation.

In contrast with acute conversion disorders when a patient has been dependent on a wheelchair for a long time organic and non-organic symptoms commonly coexist. It is often difficult to determine the relative contribution of each. The dramatic nature of the recoveries we describe, however, suggests that the apparent disabilities were largely non-organic. We accept that organic factors may become more important during prolonged follow up.[11 12]

Our experience suggests that several factors are important in achieving successful rehabilitation in these patients.

Firstly, familiarity with the degree of loss of function seen in patients with traumatic spinal lesions enables the rehabilitation team to identify incongruities in function in the patient with conversion disorder.

Secondly, the patient is formally offered a prolonged inpatient rehabilitation programme. Acceptance is seen as a guarantee that he will stay in hospital until the end of the programme. The patient must also be able to see the benefits that might accrue from recovering mobility. As his relatives observe the patient recovering and eventually walking independently his disabled role becomes untenable. Although a family who has spent several years caring for a patient's disabilities automatically offers help, we do not allow the patient to take weekend leave in the early phase as it would reintroduce the patient to the "reward mechanism" of extra care and attention by the family.

Thirdly, although we use simple behaviour treatment we do not offer psychiatric referral, believing that the patients more readily accept a medical cure.[11 13] Patients often complain of backache during the rehabilitation programme. We advise the patient that this is evidence of strain in previously weak back muscles. It therefore does not prevent continued physiotherapy.

Finally, completion of rehabilitation requires assessing the patient's community support. On discharge we retain his wheelchair. During follow up the patient is invited to discontinue the allowances and return the aids that he no longer needs. Follow up ensures that an evolving disease is not overlooked, and we have not found that follow up reinforces sickness behaviour.[4]

Although a prolonged inpatient stay is expensive, it is cost effective compared with the sum of mobility, attendance invalid care allowances, and invalidity benefit provided to a patient in a wheelchair over 10 years (roughly £52 000). Likewise the ambulant patient does not require stairlifts, ramps, or other home adaptations.

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